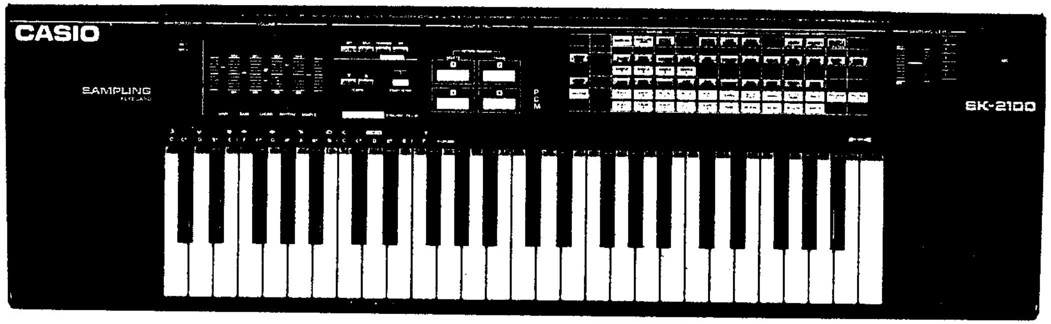
CASIO

CASIO SK-2100


CASIO
SAMPLING
SK-2100

OPERATION MANUAL 1
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INTRODUCTION

Thank you and congratulations on your purchase of the Casio SK-2100 Sampling Keyboard. Your new keyboard features exciting features and functions such as sampling, rhythm, bass and chord programming, as well as keyboard split, chord progression memory and multichannel memory. What's more, it has 2 built-in monitor speakers, so there's no need to connect it to an amp or stereo!

To obtain optimum performance and assure long-term reliability, be sure to read this manual carefully before using this sampling keyboard.

MAIN FEATURES OF THE SK-2100

1 SAMPLING

The SK-2100 features a sampling function, which allows you to "capture" virtually any audible sound and incorporate it in your music. Sounds are "sampled" via a detachable built-in microphone, and are played back via sampling pads. They can also be triggered via keys on the keyboard, at corresponding pitches, and can even be used to create polyphonic chords! What's more sampled sounds can be patched through LOOP and REVERSE effects, or incorporated into rhythm patterns.

2 MULTI-CHANNEL MEMORY

The SK-2100's MULTI-CHANNEL MEMORY function allows you to create entire songs, including melody and backing chord patterns. These are held in memory along with the selected rhythm pattern. Two different melodies may be played to memory — MELODY 1 and MELODY 2. These can be up to 2024 or 1024 steps in length, respectively, and up to 159 chord changes may be programmed as well.

3 PATTERN MEMORY

The PATTERN MEMORY function allows programing of two 2-bar patterns and two 1-bar fill-ins, including bass, rhythm, chord and sampling sounds. Create your own accompaniment patterns and play along! In addition, you can change the basic rhythm of your original patterns by selecting any of the Auto-Rhythms.

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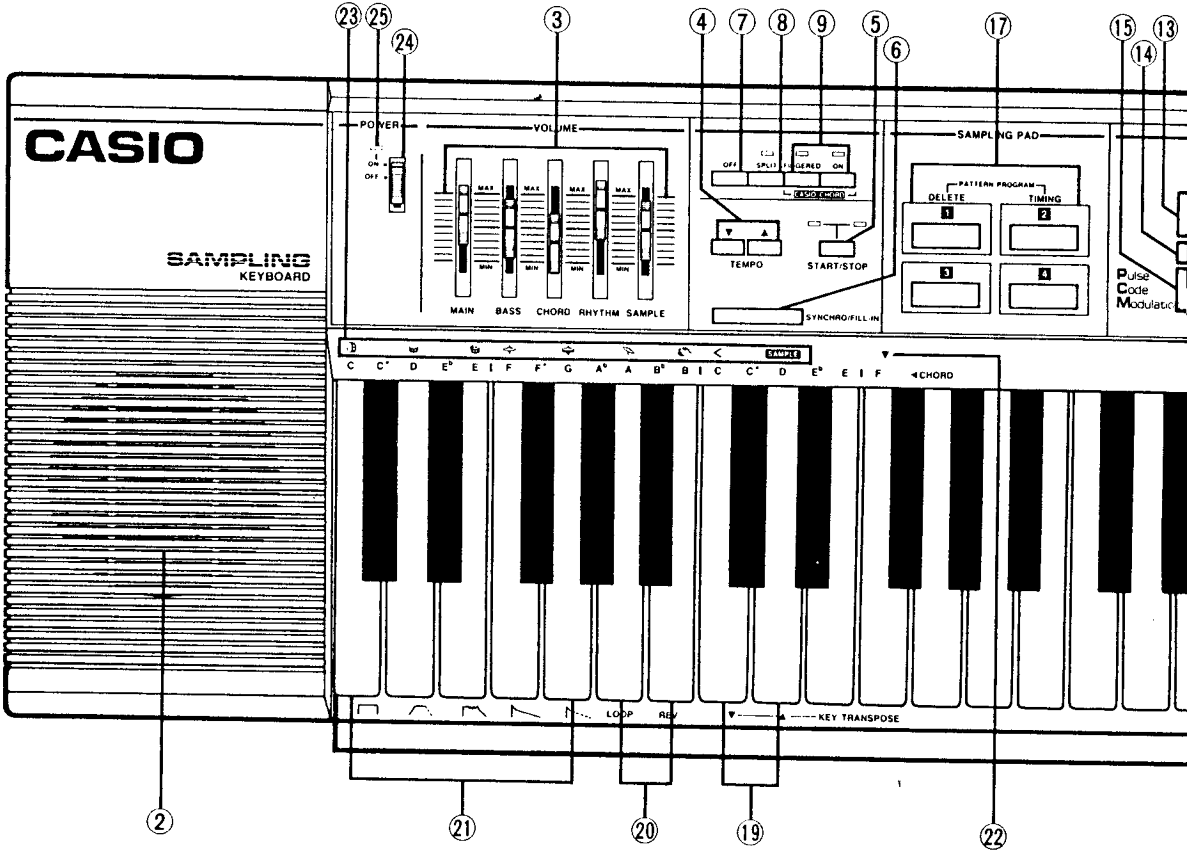
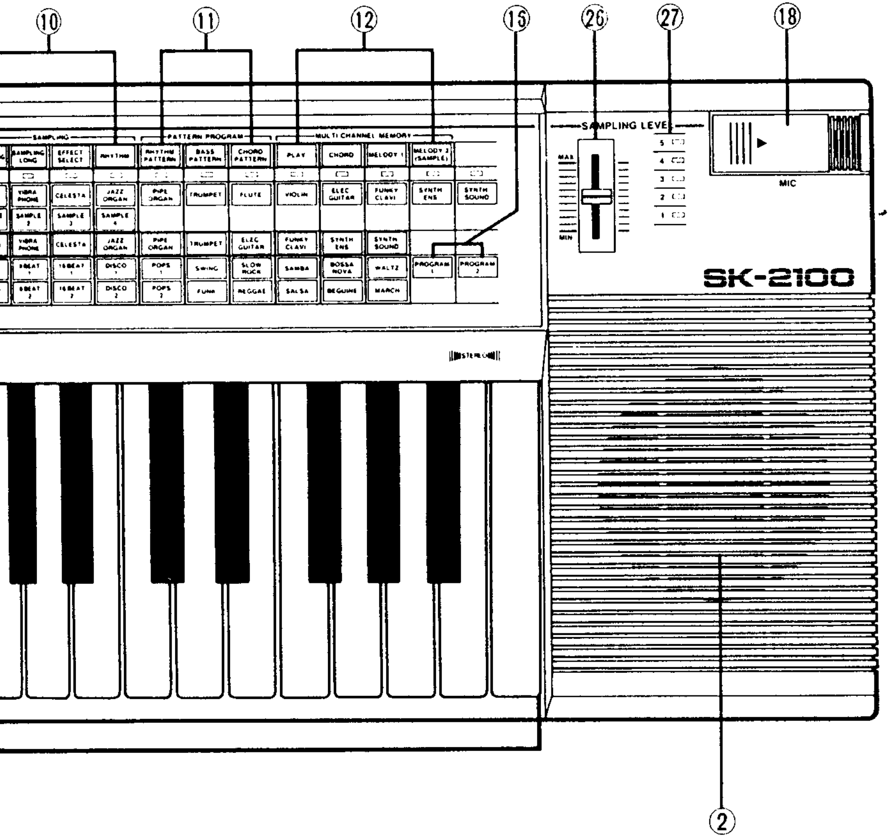
FEATURES & FUNCTIONS


㉓ ㉕ ㉔ ③ ④ ⑦ ⑧ ⑨ ⑤ ⑥ ⑰ ⑮ ⑭ ⑬
CASIO
SAMPLING
KEYBOARD
POWER
ON
OFF
VOLUME
MAX
MIN
MAIN
BASS
CHORD
RHYTHM
SAMPLE
OFF
SPLIT
FINGERED
ON
CASIO CHORD
TEMPO
START/STOP
SYNCHRO/FILL-IN
SAMPLING PAD
PATTERN PROGRAM
DELETE
TIMING
1
2
3
4
Pulse
Code
Modulatic
SAMPLE
C C# D E♭ E F F# G A♭ A B♭ B C C# D E♭ E F
◄CHORD
LOOP
REV
KEY TRANSPOSE
② ㉑ ⑳ ⑲ ㉒


⑩
⑪
⑫
⑮
㉖
㉗
⑱
SAMPLING
PATTERN PROGRAM
MULTI CHANNEL MEMORY
SAMPLING LONG
EFFECT SELECT
RHYTHM
RHYTHM PATTERN
BASS PATTERN
CHORD PATTERN
PLAY
CHORD
MELODY 1
MELODY 2 (SAMPLE)
VIBRA PHONE
CELESTA
JAZZ ORGAN
PIPE ORGAN
TRUMPET
FLUTE
VIOLIN
ELEC GUITAR
FUNKY CLAVI
SYNTH ENS
SYNTH SOUND
SAMPLE 2
SAMPLE 3
SAMPLE 4
VIBRA PHONE
CELESTA
JAZZ ORGAN
PIPE ORGAN
TRUMPET
ELEC GUITAR
FUNKY CLAVI
SYNTH ENS
SYNTH SOUND
8BEAT 1
16BEAT 1
DISCO 1
POPS 1
SWING
SLOW ROCK
SAMBA
BOSSA NOVA
WALTZ
PROGRAM 1
PROGRAM 2
8BEAT 2
16BEAT 2
DISCO 2
POPS 2
FUNK
REGGAE
SALSA
BEGUINE
MARCH
SAMPLING LEVEL
MAX
MIN
5
4
3
2
1
MIC
SK-2100
STEREO
②

FEATURES & FUNCTIONS

① KEYBOARD
49 keys. Features a keyboard split point between F3 and F#3.

② SPEAKERS
Output sounds when phone plugs are not connected to output jacks on Rear Panel.

③ VOLUME SLIDERS
Used to control overall volume (Main), accompaniment, rhythm and sample sounds output via the built-in speakers or output jacks.

④ TEMPO CONTROL KEYS
Used to raise or lower tempo of rhythm.

⑤ START/STOP KEY
Starts and stops Auto-Rhythms, Pattern Programs and Multi-Channel Memory programs.

⑥ SYNCHRO/FILL-IN KEY
Used to specify synchronized starts of rhythm when keyboard is touched and to trigger programmed rhythm fills.

⑦ OFF BUTTON
Turns OFF Keyboard Split and Casio Chord functions.

⑧ KEYBOARD SPLIT BUTTON
Used to specify the Keyboard Split function.

⑨ CASIO CHORD BUTTONS
Used to specify the mode of the Casio Chord function.

⑩ SAMPLING KEYS
Used to specify sampling modes.

⑪ PATTERN PROGRAM KEYS
Used to specify parts of patterns to be programmed in Patte Memory.

⑫ MULTI-CHANNEL MEMORY KEYS
Used to specify parts of songs to be programmed in Multi-Chann Memory.

⑬ UPPER TONE KEYS
Used to select timbre or sampled sound controlled by keys abov split point when in the Keyboard Split mode.

⑭ LOWER TONE KEYS
Used to select timbre controlled by keys below split point whe in the Keyboard Split mode.

⑮ AUTO-RHYTHM KEYS
Used to select preset Auto-Rhythms.

⑯ PROGRAM KEYS
Used to select programs in Pattern Memory.

⑰ SAMPLING PADS
Used to trigger sampled sounds. Nos. 1 and 2 are also used to delete parts of pattern program (Delete), and insert sounds in rhythm (Timing), when creating original rhythm patterns.

⑱ DETACHABLE MICROPHONE
Used to record sounds in Sampling Mode.

⑲ KEY TRANSPOSE KEYS
Used to transpose pitch of sampling sounds.

⑳ SAMPLING EFFECTS KEYS
Used to select LOOP or REVERSE effects when in the Sampling Mode.

㉑ ENVELOPE KEYS
Used to specify envelope of selected timbres in the Sampling Mode.

㉒ SPLIT POINT
Indicates the point where the Keyboard Split function divides the keyboard (between F3 and F#3).

㉓ PERCUSSION KEYS
Used to program percussion sounds in the Pattern Program rhythm.

㉔ POWER SWITCH

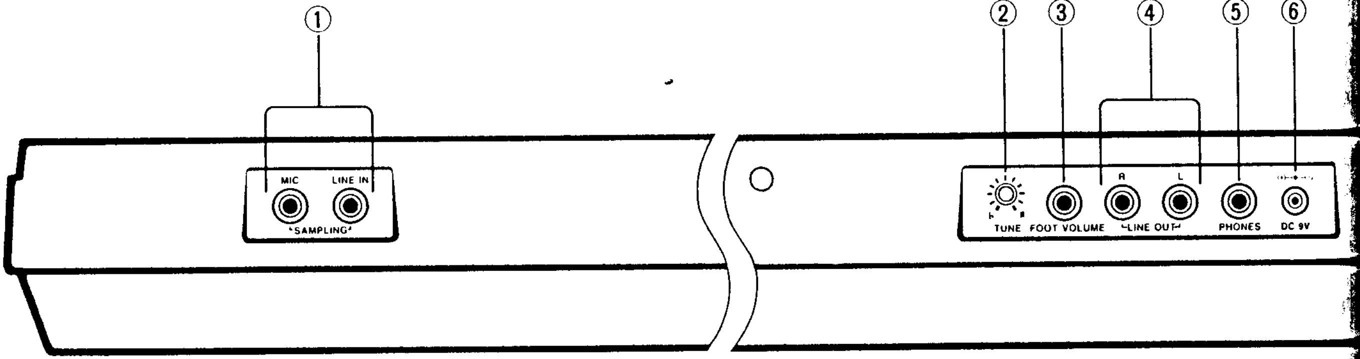
㉕ POWER INDICATOR

㉖ SAMPLING LEVEL SLIDER
Used to control sensitivity of sampling.

㉗ SAMPLING LEVEL INDICATOR
LEDs indicate level of sample sound input.

BASIC CONNECTIONS

■ Rear Panel


①
②
③
④
⑤
⑥
MIC
LINE IN
SAMPLING
TUNE
FOOT VOLUME
R
L
LINE OUT
PHONES
DC 9V

① SAMPLING JACKS

Used to connect external sampling mic or sampling sound from another external sound source.

② TUNING CONTROL

Adjusts pitch of entire keyboard within ±50 cents.

③ FOOT VOLUME JACK

For connection of volume foot control (VP-2, optional).

④ OUTPUT JACKS (R/L)

For connection to external keyboard amplifier or audio eq

⑤ HEADPHONE JACK

For connection of headphones (CP-2 optional).

⑥ AC ADAPTOR JACK

For connection of AC adaptor (AD-5 optional).

POWER SUPPLY

This unit operates on both AC and DC power.

<DC power>

•Dry batteries

This unit can be powered by six D size (SUM-1) manganese dry batteries. Weakened batteries will result in lower volume or poor tonal quality. The power indicator lamp will gradually lose its brightness when battery power weakens. At this time, change batteries or shift to one of the alternate power source mentioned below.

Battery replacement:

① Open the battery compartment cover on the bottom of the unit and take out used batteries.

② Load new batteries taking care that polarity is correct.

* It is advisable to replace all six batteries at the same time for longer battery life.

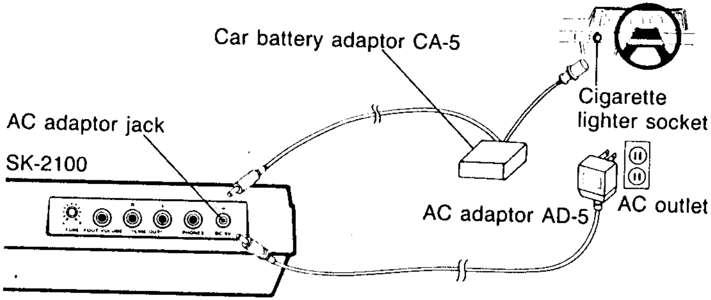
* Refer to the specifications for standard battery life.

•Car battery

With the car battery adaptor (CA-5, optional), DC power is supplied from a car battery through the cigarette lighter socket.

<AC power>

An AC adaptor (AD-5, optional) is required to connect to an AC outlet. Use only an adaptor with the same voltage rating (100, 117, 220, or 240V) as the power supply in your area to prevent component damage. Plug the AC adaptor into the AC outlet and the cord into the unit. This will automatically cut off the battery power supply.



★Auto power off function

Power is automatically cut off approximately 6 minutes after the last operation of the unit. Power supply can be restored by switching power OFF and then ON again.

CAUTION

- *Use only genuine CASIO adaptors to avoid risk of damage.
- *Remove batteries from the battery compartment when the unit is not used for extended periods. (Battery leakage can damage electrical parts.)
- *The adaptor may become warm when left connected to an outlet. This is normal, but the adaptor should be disconnected when not in use.

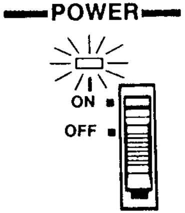
*THE FOLLOWING CONDITIONS CAN CAUSE BATTERIES TO BURST:

1. *Use of adaptors other than genuine CASIO adaptors.*
2. *Loading batteries with polarities reversed.*

PART 1: BASIC OPERATIONS

■ HOW TO MAKE MUSIC ON THE SK-2100

① Turn ON power.



- After selecting the power source you intend to use and making necessary connections, press the POWER BUTTON.
- The POWER INDICATOR will light, and you will hear the sound of the built-in amplifier coming on over the speakers. Immediately after the power is turned ON, the PIANO Tone (timbre) is automatically selected.

② Adjust the volume.

- Using the MAIN VOLUME SLIDER, adjust the main volume to an appropriate level.

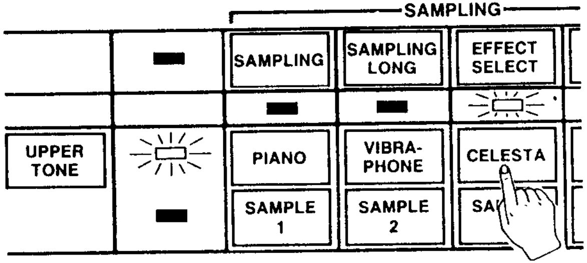
NOTE: The MAIN VOLUME may also be controlled by connecting an optional VP-2 Foot Volume Pedal.

Now, go ahead and get a feel for the SK-2100 keyboard. Notice that in this initialized mode, the PIANO Tone sounds on all keys of the keyboard, and that indicators in the corresponding horizontal and vertical column light up.

A) PRESET TONES

The SK-2100 is equipped with 12 factory preset Tones, as well as 4 preset sample sounds. The Tones can be selected by pressing any of the UPPER TONE KEYS. (When power is turned ON, PIANO is automatically selected.)

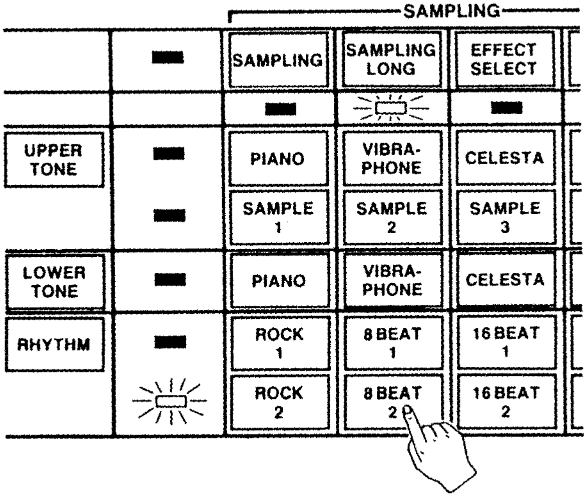
When an UPPER TONE KEY is pressed, an indicator above the selected key lights up.



B) AUTO-RHYTHM FUNCTION

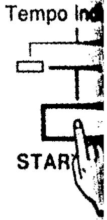
The SK-2100's Auto-Rhythm function features a total of 20 different rhythms, and 20 corresponding fill-in patterns. The basic rhythms can be selected by pressing any of the AUTO-RHYTHM KEYS.
(When power is turned ON, ROCK 1 is automatically selected.)

When an AUTO-RHYTHM KEY is pressed, indicators in the corresponding horizontal and vertical columns light.


SAMPLING
SAMPLING
SAMPLING LONG
EFFECT SELECT
UPPER TONE
PIANO
VIBRA-PHONE
CELESTA
SAMPLE 1
SAMPLE 2
SAMPLE 3
LOWER TONE
PIANO
VIBRA-PHONE
CELESTA
RHYTHM
ROCK 1
8 BEAT 1
16 BEAT 1
ROCK 2
8 BEAT 2
16 BEAT 2

■ HOW TO START AN AUT

① After selecting the desired type of rhythm the AUTO-RHYTHM KEYS, press the ST

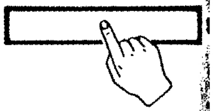

Tempo In
STAR

•The rhythm starts, and the TEMPO INDICA red LED marking the first beat of each measu in each measure are indicated by a green

■ HOW TO USE SYNCHRO

This function allows you to start the rhythm with the first note played on the keyboard (b

① After selecting the desired rhythm, press th IN KEY.



•The red TEMPO INDICATOR lights, indicati Start function is in a standby mode.

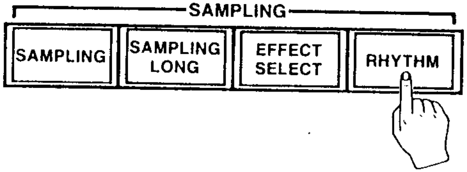
Addition to page 11

PART 1: BASIC OPERATIONS

B) AUTO-RHYTHM FUNCTION

■ USING A SAMPLED SOUND AS A RHYTHM

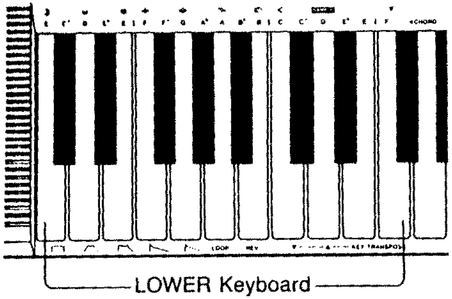
① Press the SAMPLING RHYTHM key after start of the rhythm.


SAMPLING
SAMPLING
SAMPLING LONG
EFFECT SELECT
RHYTHM

- Sampled sound rhythm patterns are preset to all auto-rhythm patterns.
- The sampled sound becomes inaudible when the SAMPLING RHYTHM key is pressed again.

SK-2100

The rhythm will start as soon as you play a LOWER TONE key on the keyboard (any key below the split point).



•Adjust Auto-Rhythm Volume

Adjust the Auto-Rhythm volume to an appropriate relative level using the RHYTHM VOLUME SLIDER.

■ HOW TO CHANGE TEMPO

To raise Tempo, press the TEMPO CONTROL KEY (▲) and release. Tempo becomes faster each time the key is depressed. To lower Tempo, press the TEMPO CONTROL KEY (▼) and release. Tempo becomes slower each time the key is depressed.

- Tempo remains unchanged when either of the TEMPO CONTROL KEYS are held down. Keys must be pressed repeatedly to make major changes in tempo.
- Pressing both TEMPO CONTROL KEYS simultaneously returns Tempo to initialized setting.

■ HOW TO USE FILL-IN FUNCTION

The SK-2100 features 20 preset rhythm fill-in patterns, corresponding to each of the Auto-Rhythms. Pressing the SYNCHRO/FILL-IN KEY while a rhythm is playing inserts a fill-in pattern into the normal rhythm. If the key is held down, the fill-in pattern is repeated until the end of the measure during which the key is released.

■ HOW TO STOP AN AUTO-RHYTHM

Auto-Rhythm can be stopped at any point by simply pressing the START/STOP KEY once again.

C) KEYBOARD SPLIT FUNCTION

The SK-2100's KEYBOARD SPLIT function is used in a variety of ways, for various effects.

■ HOW TO SELECT KEYBOARD SPLIT

① Press the SPLIT BUTTON. In this basic KEYBOARD SPLIT mode, the keyboard is "split" into UPPER TONE and LOWER TONE sections.

- Different Tones may be specified for each section, using the UPPER TONE KEYS and LOWER TONE KEYS, respectively.

NOTE: The KEYBOARD SPLIT function comes in effect automatically whenever the CASIO CHORD function is selected.

D) AUTO-ACCOMPANIMENT (CASIO CHORD FUNCTION)

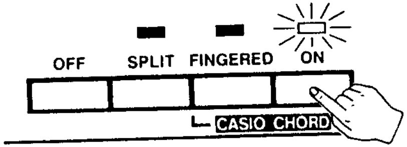
The SK-2100 is equipped with Casio's unique CASIO CHORD function. This lets you add full-chord accompaniment to your melodies in either One-Finger, or Fingered modes, depending on your skill and preference.

■ HOW TO USE THE CASIO CHORD FUNCTION

•One-finger Accompaniment (Casio Chord)

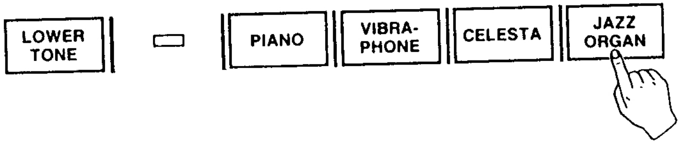
This Auto Accompaniment function lets you automatically play full chords with just one finger, and adds an appropriate bass line corresponding to the rhythm style and chords played.

① Press the CASIO CHORD ON BUTTON.



- A corresponding red LED will light.

② Select the accompaniment tone by pressing a desired LOWER TONE KEY.



③ Start the selected rhythm in the Auto-Rhythm section. (Use Synchro Start if you desire.)

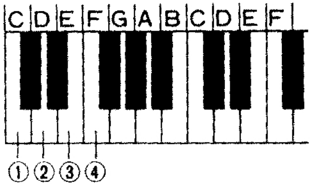
④ When any of the keys below the split point are played, a corresponding major chord is sounded.

In addition to major chords, the CASIO CHORD function allows the playing of various other chords as shown on the next page:

Relationship Between Keys Played and Type of Chord

hen the Casio Chord function is ON, major chords are produced which have the note pressed as a root. They are automati- lly played in time with the rhythm pattern, together with an appropriate bass line.

n order to change the Auto Accompaniment to a minor chord, simply press any other key on the Lower Tone section of the yboard to the right of the root key, together with the root. Pressing one more key (for a total of three) under these conditions roduces seventh chords, while pressing a fourth key produces minor seventh chords.



EXAMPLES>

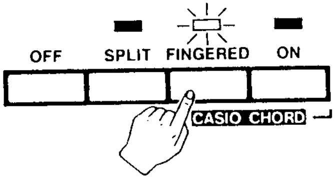
(C major)......................... Press ①
m (C minor)...................... Press ① & ② together
7 (C seventh).................... Press ①, ② & ③ together
m7 (C minor seventh)........ Press ①, ②, ③ & ④ together

OTE: Not only ②, ③ and ④, but any keys to the right of ① on the Lower Tone section of the keyboard will produce the same effect, regardless of whether they are black or white keys.

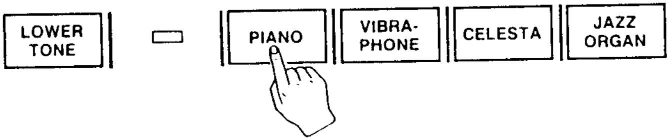
•Fingered Accompaniment

Fingered accompaniment lets you create chords yourself, by playing corresponding keys, and adds an appropriate bass line in correspondence with the rhythm style and type of chords played.

① Press the CASIO CHORD FINGERED BUTTON.


OFF
SPLIT
FINGERED
ON
CASIO CHORD

② Select the LOWER TONE which you wish to use as accompaniment.


LOWER TONE
PIANO
VIBRA-PHONE
CELESTA
JAZZ ORGAN

③ Start the selected rhythm in the Auto-Rhythm section. (Use Synchro Start if you desire.)

④ The keyboard responds to chords played by inserting them in the accompaniment pattern, together with an appropriate bass line.

- Adjust the level of the accompaniment sound with the BASS and CHORD VOLUME SLIDERS.
- Adjust the tempo of the rhythm with the TEMPO CONTROL KEYS.

PART 2: SAMPLING

■ WHAT IS SAMPLING?

As the name suggests, "sampling" allows you to record, or "sample" sounds and incorporate them in musical patterns, as notes, chords, rhythm sounds, or incidental percussion sounds.

■ HOW DOES IT WORK?

Virtually any audible sound may be recorded into the SK-2100's sampling memory, via the built-in detachable microphone, an external microphone or the LINE IN sampling jack.
The SK-2100 sampling memory features 4 memory "areas." Each area holds sampled sounds of up to 0.8 seconds. Two different sampling modes are used, "SAMPLING" and "SAMPLING LONG." The SAMPLING mode allows sampling of up to 4 different sounds, each of which may be up to 0.8 seconds in length. In other words, each SAMPLE sound takes up a single memory area. SAMPLING LONG sounds take up two areas, for a total of 1.6 seconds. These may be entered into SAMPLE CHANNELS 1 and 3.

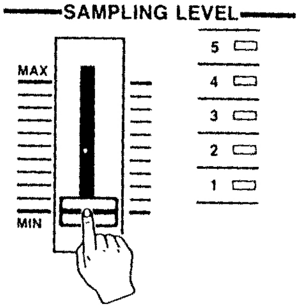
<Initialized Sampling Sounds>

The SK-2100 comes with 4 factory preset sampling sounds, assigned to the four SAMPLE CHANNELS as listed below:

Sample 1 — Conga
Sample 2 — Acoustic Piano
Sample 3 — Vibraphone
Sample 4 — Horn

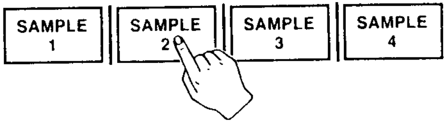
These sounds are selected automatically, each time the sampling function is initialized. Initialization of these sounds can be accomplished via the following procedure.

① Lower sampling sensitivity to "0" via the SAMPLING LEVEL SLIDER.

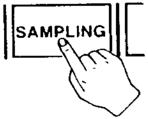


② Press the SAMPLE CHANNEL KEY (SAMPLE 1-4) corresponding to the sampled sound to be initialized:

<EXAMPLE> Press the SAMPLE 2 KEY.



③ Press the SAMPLING KEY.

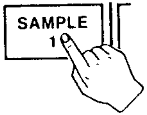


- Initialized is marked by the sound of a bass drum.
- Previously sampled sound is erased from the channel specified, and the factory preset sound is selected.

NOTE: All four channels are intialized if batteries are removed (or when no power is supplied to unit).

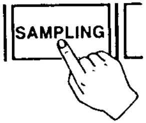
■ HOW TO SAMPLE SOUNDS

① Press the SAMPLE 1 KEY.



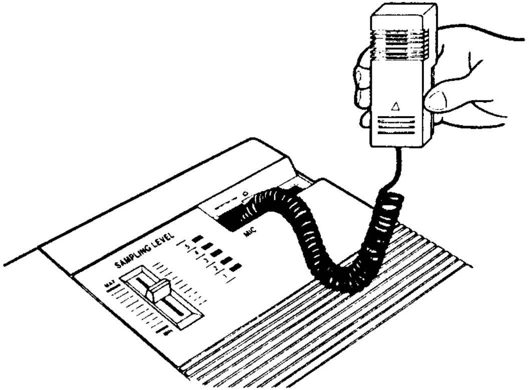
- Red indicators in the corresponding horizontal and vertic columns.

② Press the SAMPLING KEY.



- A green LED lights in the corresponding horizontal column, i dicating that the Sampling function is ready to sample.

③ Sampling begins as soon as sounds are detected, via an au trigger function. The sensitivity of this function can be adju ed via the SAMPLING LEVEL SLIDER.



- SAMPLE END is marked by the sound of a cymbal crash.
- To sample in the other sample areas, press the desired SAMPLE CHANNEL KEY, and then press the SAMPLING or SAMPLING LONG KEYS.

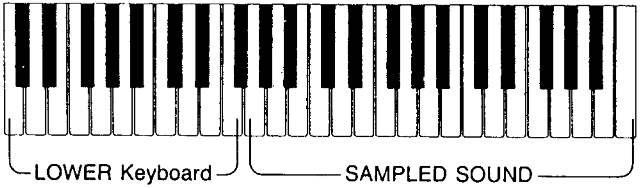
NOTES:
- SAMPLING LONG can only be selected in SAMPLE 1 and SAMPLE 3 channels. When selected, SAMPLING sounds (short) are erased from memory.
- When sounds are entered into SAMPLE 2 or 4, with SAMPLE LONG sounds already in SAMPLE 1 or 3, respectively, SAMPLE 1 or 3 return to initialized sound.

■ HOW TO PLAY BACK SAMPLE SOUNDS

[1] Playing Sampled Sounds On Keyboard

Immediately after the SAMPLE END sound is heard, the sampled sound may be played back on any of the UPPER TONE keys, as the SAMPLE CHANNELS are among the tones which can be selected for this half of the keyboard.

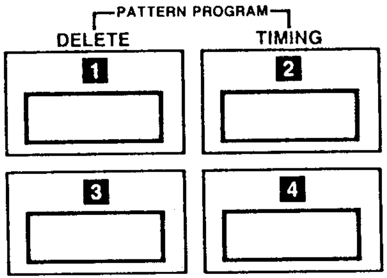
- In this mode, sampled sounds are reproduced at the pitch of key or keys which are depressed. Notice that the speed of sampled sound replay also changes with the pitch.
- Sampled sounds may be played on the UPPER TONE keys only (above the split point). When "SAMPLE 1 ~ 4" are chosen as Upper Tone timbre, the KEYBOARD SPLIT function is chosen automatically.



- Sampled sounds are recorded in memory having a pitch which corresponds to A4.

[2] Playing Sampled Sounds On Sampling Pads

Sampled sounds may also be played back at any time on the SAMPLING PADS located at the center of the operation panel.



NOTES:

- The pitch of sample sounds played back via the SAMPLING PADS is fixed at the pitch at which they were sampled. The pitch of initialized sounds is "A" (octaves differ).
- Polyphonic chords comprised of sampled sounds may contain up to three notes. Please do not exceed this limit. 3-note polyphonic chords only are possible when the SAMPLING PADS are played in combination with the keyboard.

■ HOW TO UTILIZE SAMPLE SOUNDS

Depending on the type of sounds sampled, they can be used effectively in creating realistic instrument sounds (acoustic piano, strings, woodwinds, etc.), or percussion sounds (human voice, percussion instruments, etc.).

*See "PART 3: PATTERN PROGRAMMING" and "PART 4: MULTI-CHANNEL MEMORY" for details on how to program sampled sounds into PATTERNS and MULTL-CHANNEL MEMORY.

■ SAMPLING EFFECTS

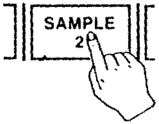
The SK-2100 features three different "sampling effects" — LOOP, REVERSE, and TRANSPOSE.
In addition, various envelopes are provided to alter the characteristics of sampled sounds.

- The LOOP effect causes the sampled sound to be repeated as long as any key is held down on the keyboard.
- The REVERSE effect causes the sampled sound to be played back in reverse, much like running a tape in reverse.
- The TRANSPOSE effect raises or lowers the pitch of the sampled sound chromatically.
- Key may be transposed up to 8 steps down (4 whole tones) or 7 steps up (3.5 tones).
- Sample Pad sounds are transposed simultaneously when the Key Transpose function is used.

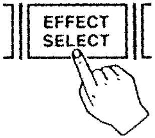
HOW TO USE SAMPLING EFFECTS

elect the SAMPLE CHANNEL in which you desire to use a AMPLING EFFECT by pressing the corresponding SAMPLE HANNEL KEY.

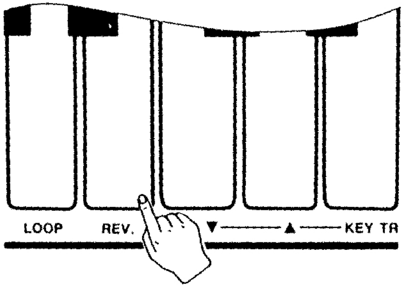
XAMPLE> Press the SAMPLE 2 KEY.



ss the EFFECT SELECT KEY.



ss the SAMPLING EFFECTS KEY (on the keyboard) cor-ponding to the desired effect.

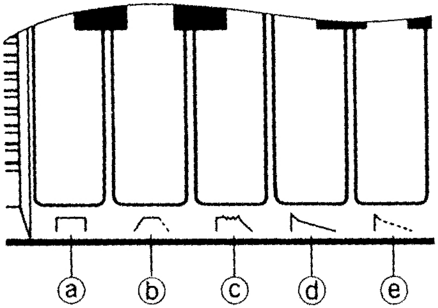


- A sound will mark the engagement of the selected effect — a high-hat sound in the case of the LOOP or TRANSPOSE, and a cymbal crash preceded by hi-hat strokes in the case of the REVERSE effect.

- To cancel LOOP or REVERSE effect, repeat steps ① through ③.

■ HOW TO USE ENVELOPES

Envelopes are voltages which change as a function of time. Practically speaking, they determine the loudness and timbre of sounds. In the SK-2100, they are used to alter the characteristics of sampled sounds.



ⓐ .... Used to return envelope-altered sampling sound to original state.

ⓑ .... SLOW ATTACK

Slow increase of volume at beginning as with violin or cello

ⓒ .... TREMOLO

Slight vibrato

ⓓ .... DAMPED TONE I

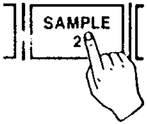
Piano/guitar damped tone, slow decay

ⓔ .... DAMPED TONE II

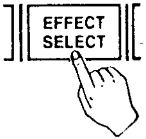
Slower decay than ⓓ

① Select the SAMPLE CHANNEL in which you desire to use an ENVELOPE by pressing the corresponding SAMPLE CHANNEL KEY.

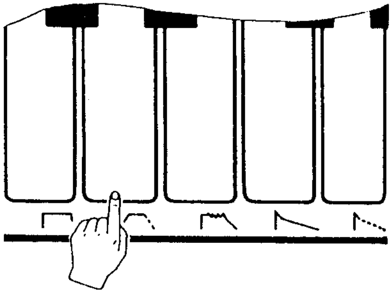
<EXAMPLE> Press the SAMPLE 2 KEY.



② Press the EFFECT SELECT KEY.



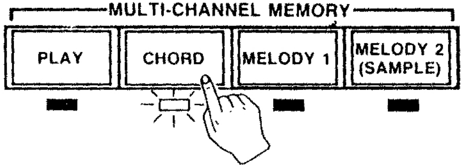
③ Press the ENVELOPE KEY (on the keyboard) corresponding to the desired ENVELOPE.



■ HOW TO ALTER PITCH OF SAMPLE PAD SOUNDS

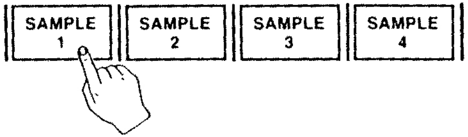
The pitch of any or all Sample Pad sounds may be changed without affecting the pitch of the keyboard. The range within which pitch may be altered corresponds to the UPPER TONE keys.

① Press the CHORD KEY on the Multi-Channel Memory section.

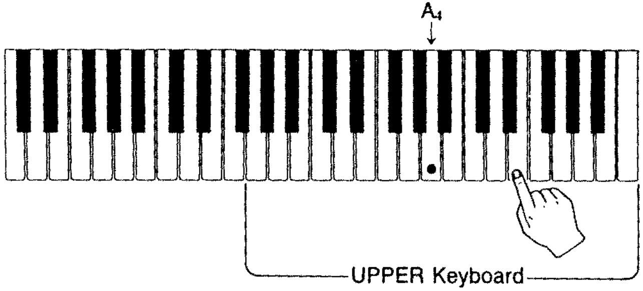

MULTI-CHANNEL MEMORY
PLAY
CHORD
MELODY 1
MELODY 2 (SAMPLE)

- The corresponding LED lights indicating pitch of Sample Pad may be specified.

② Specify the Sample Pad to be altered by pressing a SAMPLE CHANNEL KEY (1 through 4). Sampled sounds as well as PCM preset Sample Sounds may be selected for alteration.


SAMPLE 1
SAMPLE 2
SAMPLE 3
SAMPLE 4

③ Specify desired pitch by playing a key on the UPPER TONE half of the keyboard. The initialized pitch corresponds to A4.


A4
UPPER Keyboard

④ Press the CHORD KEY once again.

- LED goes out indicating procedure is complete.

NOTE: Sample Sounds and Sampling Effect status are protected via a memory back-up function. They are held in memory as long as power is supplied to unit via batteries or AC adaptor, even if power is turned OFF.

PART 3: PATTERN PROGRAMMING

The SK-2100 features a PATTERN MEMORY, which is capable of storing two different patterns of up to two measures each. These patterns may consist of rhythms, bass lines and accompanying chords. They are specified via the PROGRAM 1 and PROGRAM 2 KEYS.

In order to start pattern programming from scratch, it's necessary to erase initialized or previously programmed patterns in one of the PROGRAM memories, one element at a time.

① Erase programmed RHYTHM PATTERN by pressing RHYTHM PATTERN KEY, DELETE KEY (#1 SAMPLE PAD) and PROGRAM KEY (1 or 2), in successive order.

② Erase programmed BASS PATTERN by pressing BASS PATTERN KEY, DELETE KEY (#1 SAMPLE PAD) and PROGRAM KEY (1 or 2), in successive order.

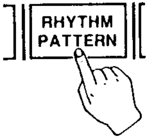
③ Erase programmed CHORD PATTERN by pressing CHORD PATTERN KEY, DELETE KEY (#1 SAMPLE PAD) and PROGRAM KEY (1 or 2), in successive order.

- In this state, the specified PATTERN PROGRAM (1 or 2, whichever you erased) is "empty" and ready to be programmed.

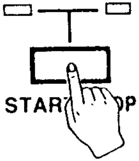
■ HOW TO PROGRAM RHYTHM PATTERNS

It's probably easiest to start your programming with the rhythm. This pattern may consist of 2 measures featuring up to 7 percussion sounds and all 4 sampling sounds, if desired.

① Press the RHYTHM PATTERN KEY.



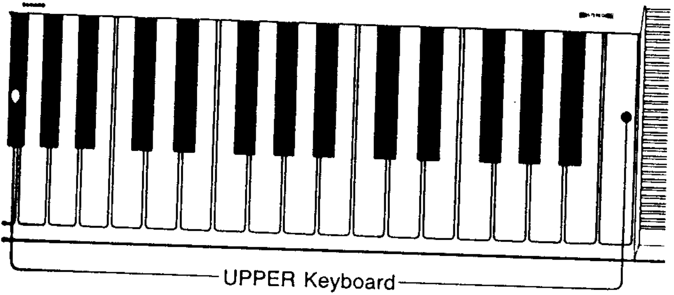
② Press the START/STOP KEY.

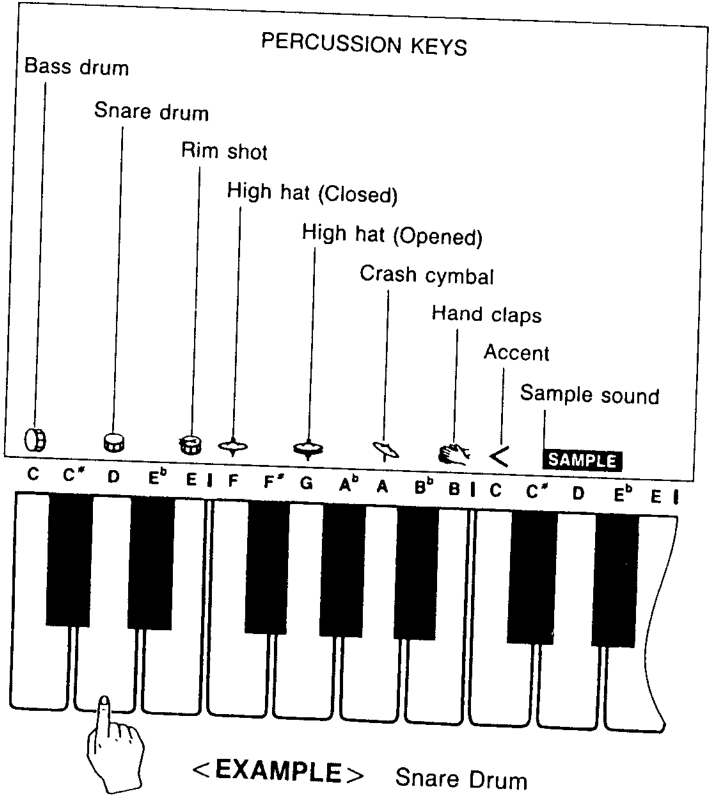


- The TEMPO DISPLAY flashes, acting as a metronome. The red LED indicates the first beat in each measure and the green LED counts out the subsequent beats (4 beats to a measure).

③ Select the percussion instrument to be programmed by pressing the corresponding PERCUSSION KEY (on the keyboard).

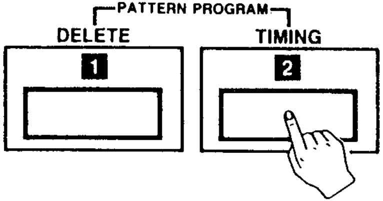
NOTE: To select sample sounds as rhythm sound sources, specify the Sample Sound (1 through 4) via the SAMPLE CHANNEL KEYS after pressing the "SAMPLE" percussion key (**SAMPLE**) on the keyboard. Input notes by playing UPPER TONE keys.


UPPER Keyboard

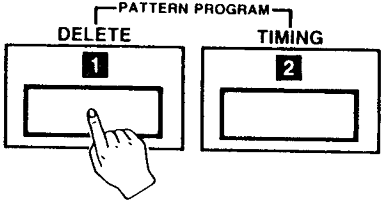

PERCUSSION KEYS
Bass drum
Snare drum
Rim shot
High hat (Closed)
High hat (Opened)
Crash cymbal
Hand claps
Accent
Sample sound
SAMPLE
C
C#
D
E♭
E
F
F#
G
A♭
A
B♭
B
C
C#
D
E♭
E

<EXAMPLE> Snare Drum

④ Program selected sound by "tapping" the TIMING PAD (#2 SAMPLE PAD). Programmed pattern will repeat at the end of the second measure.


PATTERN PROGRAM
DELETE
TIMING
1
2

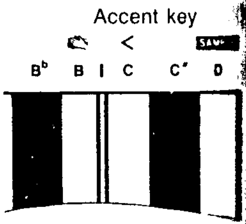
- Hold down DELETE PAD to delete any or all of this pattern. Pattern will be deleted for as long as the pad is held down.


PATTERN PROGRAM
DELETE
TIMING
1
2

NOTE: Only the specified instrument's part in the overall pattern is deleted via the DELETE PAD.

- Accents may be added to any beat via the ACCENT KEY.

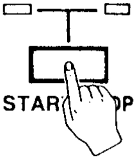
- To input ACCENTS, press the Timing Key after pressing the ACCENT KEY on the keyboard.


Accent key
<
B♭
B
C
C♯
D

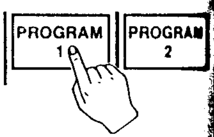
⑤ When you are satisfied with one instrument's part, select th next by pressing another PERCUSSION KEY.

⑥ Repeat steps ① through ⑥ to program other percussion instr ment sounds in the pattern.

⑦ Once your RHYTHM PATTERN is complete, press the START/STOP KEY to stop the rhythm.

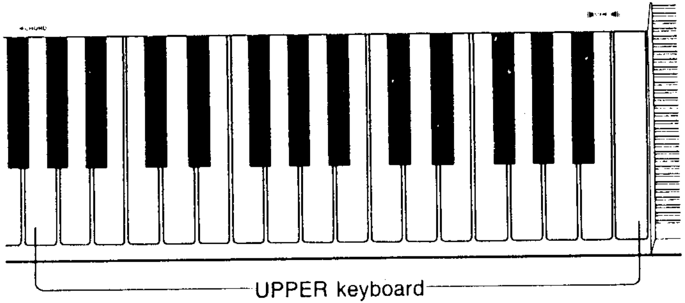


⑧ Press the PROGRAM KEY (1 or 2, whichever you selected above).


PROGRAM
1
PROGRA
2

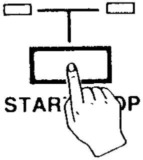
- Your RHYTHM PATTERN is now entered into the PATTER MEMORY of the PROGRAM which you specified.

③ Add a suitable bass line by playing the UPPER keyboard.

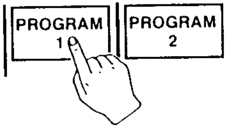


- Hold down DELETE PAD to delete any or all of this pattern. Pattern will be deleted for as long as the pad is held down.

④ When you are satisfied with the BASS PATTERN, press the START/STOP key to stop the rhythm and bass.



⑤ Press the PROGRAM KEY (1 or 2, whichever you selected above).

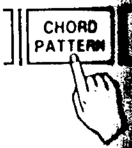


- Your BASS PATTERN is now entered into the PAT
MEMORY of the PROGRAM which you specified.

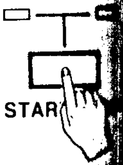
■ HOW TO PROGRAM CHORD PATTERNS

Complete your PATTERN PROGRAM by programming the
mic pattern of chord accompaniment.

① Press the CHORD PATTERN KEY.

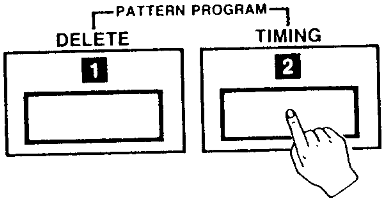


② Press the START/STOP KEY.



- The rhythm and bass patterns which you just program
play repeatedly.

③ Program the rhythmic pattern of chord accompaniment b
ping" the TIMING PAD (#2 SAMPLE PAD). Program
tern will repeat at the end of the second measure.



- Hold down DELETE PAD to delete any or all of this pattern. Pattern will be deleted for as long as the pad is held down.

④ When you are satisfied with the CHORD PATTERN, press the START/STOP KEY to stop the completed pattern.

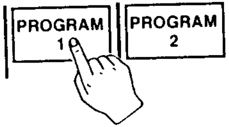
⑤ Press the PROGRAM KEY (1 or 2, whichever you selected above).

- Your CHORD PATTERN is now entered into the PATTERN MEMORY of the PROGRAM which you specified.

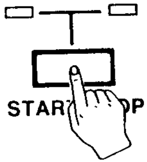
■ HOW TO "PLAY" PROGRAMMED PATTERNS

Now that your PATTERN is complete, you can "play" it by playing CASIO CHORD progressions on the LOWER TONE half of the keyboard, and playing original melodies on the UPPER TONE half.

① Press the PROGRAM KEY (1 or 2, whichever you selected above).



② Press the START/STOP KEY.



- The programmed rhythm will start.
- The bass line and chord accompaniment begins when any LOWER TONE key on the keyboard is played. Bass lines automatically follow the progression of chord changes at any point in the pattern.
- Melodies can be played on the UPPER TONE keys on the keyboard. Select the timbre via the UPPER TONE KEYS. (Note that SAMPLE sounds can also be used to play the melody part.)
- Percussion fill-in patterns can be played at any point by pressing the SYNCHRO/FILL-IN KEY.

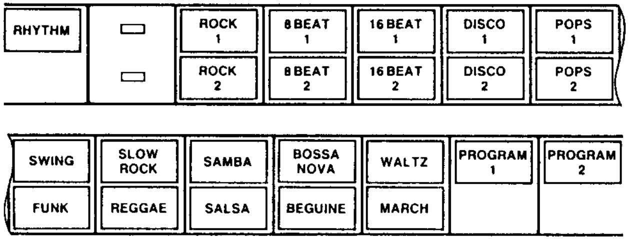
PART 4: MULTI-CHANNEL MEMORY

The SK-2100's MULTI-CHANNEL MEMORY function holds 2 different melodies, one featuring up to 2024 steps using the preset tones, and the other featuring up to 1024 steps using a sampled sound. In addition, it holds up to 159 chord changes.

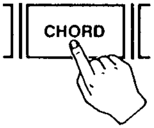
■ HOW TO PROGRAM CHORD MEMORY

The CHORD memory is capable of storing a melody of up to 159 chords.

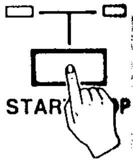
① Specify a suitable rhythm (may be one you have programmed in PATTERN MEMORY).


RHYTHM
ROCK 1
8 BEAT 1
16 BEAT 1
DISCO 1
POPS 1
ROCK 2
8 BEAT 2
16 BEAT 2
DISCO 2
POPS 2
SWING
SLOW ROCK
SAMBA
BOSSA NOVA
WALTZ
PROGRAM 1
PROGRAM 2
FUNK
REGGAE
SALSA
BEGUINE
MARCH

② Press the CHORD MEMORY KEY.



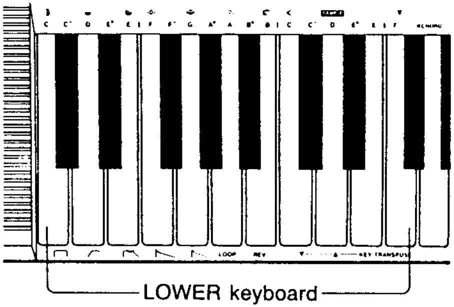
③ Press the START/STOP KEY.



•The specified rhythm starts after a 1 measure count.

NOTE: Synchro Start function may also be used.

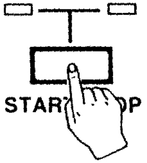
④ Play desired chord accompaniment in CASIO CHORD o GERED chord modes.


LOWER keyboard

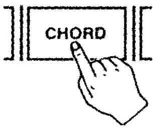
•The timbre of the chord accompaniment may be chang ing recording of the track by pressing any of the LOWER T KEYS. The RHYTHM may also be changed. The corre ing LEDs do not light in these cases.

NOTE: If the memory capacity is exceeded, both the red and green LEDs of the TEMPO INDICATOR light simultaneously.

⑤ Press the START/STOP KEY to stop.



⑥ Press the CHORD MEMORY KEY once again to exit from the programming mode.



▼ STEP CHART

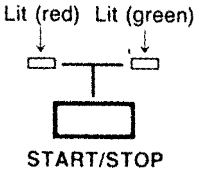
Chord Name \ Casio Chord		on	fingered
(M)	Major	1	3
m	Minor	2	3
7	Seventh	3	4
m7	Miner Seventh	4	4
M7	Major Seventh		4
$m7^{-5}$	Minor seventh flat five		4
sus4	Sus four		3
aug	Augmented		3
dim	Diminished		4

NOTES:

- A maximum of 159 "chords" may be held in the Multi-Channel Memory. Specifically, each key which is depressed on the keyboard is counted as a single step, and up to 159 steps may be stored in memory. Because of this, the number of steps taken up by a Casio Chord differs from those of fingered chords. Refer to the Step Chart for examples of how "chords" are calculated for memory purposes.

- If the 159-step capacity is exceeded, memory overload is indicated by the TEMPO INDICATORS, which light simultaneously. Further input of chords becomes impossible. To exit from this mode, press the START/STOP KEY.

<Memory Overload Indicated>



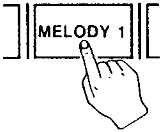
- To erase the entire chord memory program, enter the memory programming mode, press the START/STOP KEY once, and press it once again during the first measure.

- It is possible to alter the LOWER TONE sound (accompaniment) or select a different Rhythm pattern while programming in Chord Memory, however selected Tone or Rhythm are not displayed. Also, the newly selected Tone or Rhythm are not put into memory. Because of this, Tone and Rhythm sound can be selected when the program is played back.

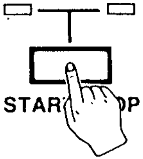
■ HOW TO PROGRAM MELODY 1

Melody 1 tone may be selected from any of the preset UPPER TONE KEYS.

① Press MELODY 1 KEY.



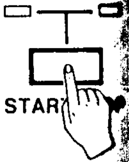
② Press START/STOP KEY.



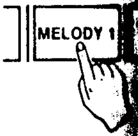
- The selected rhythm pattern, chord accompani
(programmed above) and bass line start after a 1 measure

③ Play desired melody along with accompaniment.

④ Press START/STOP KEY to stop.



⑤ Press MELODY 1 KEY once again to exit from programming mode.



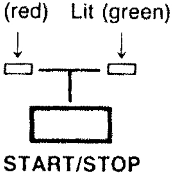
NOTES:

- If the memory capacity is exceeded, both the red and green LEDs of the TEMPO INDICATOR light simultaneously.

- A maximum of 2,000 notes may be held in Melody 1 of the Multi-Channel Memory. Each note counts as a single note in the case of polyphonic chords, so that a chord containing 3 notes, for example, would count as 3 notes for memory purposes.

<Memory Overload Indicated>

- If the 2,000-step capacity is exceeded, memory overload is indicated by the TEMPO INDICATORs, which light simultaneously. Further input of notes in Melody 1 becomes impossible. To exit from this mode, press the START/STOP KEY.



- To erase the entire Melody 1 program, enter the memory programming mode, press the START/STOP KEY once, and press it once again during the first measure.

- It is impossible to change the Tone during the programming of Melody 1. Desired Tone should be selected before beginning programming. Also, Tone and Rhythm are not held in program memory. Because of this, preset Tone and Rhythm sound can be selected for Melody 1.

■ HOW TO PROGRAM MELODY 2

A second melody can be added to MELODY 1. In this case, the Sample Sounds may be selected.

- Program by following procedures described for MELODY 1.

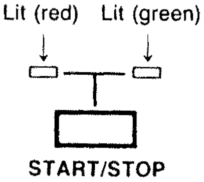
NOTES:

- In this mode, timbre changes and any sounds input via sampling pads are also recorded.

- A maximum of 1,000 notes may be held in Melody 2 of the Multi-Channel Memory. Each note counts as a single note in the case of polyphonic chords, so that a chord containing 3 notes, for example, would count as 3 notes for memory purposes.

<Memory Overload Indicated>

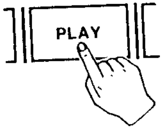
- If the 1,000-step capacity is exceeded, memory overload is indicated by the TEMPO INDICATORs, which light simultaneously. Further input of notes in Melody 2 becomes impossible. To exit from this mode, press the START/STOP KEY.



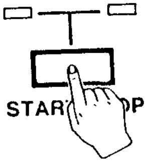
- To erase the entire Melody 2 program, enter the memory programming mode, press the START/STOP KEY once, and press it once again during the first measure.

■ HOW TO PLAY BACK MULTI-CHANNEL MEMORY

① Press PLAY KEY.



② Press the START/STOP KEY.



- The programmed rhythm pattern, chord accompaniment bass line, and melodies start after a 1 measure intro count.

HINTS:

- Try using the MULTI-CHANNEL memory has an accompaniment-only function by leaving the MELODY channels empty — just recording the chord progressions.
- During playback, alternate timbres and rhythms may be selected, although they will not be indicated via the LEDs.

UBLESHOOTING

that batteries are not dead. Contents of memory will not be protected if batteries become dead.

Trouble	Possible cause	Remedy
thm does not start	System initialization is carried out for approximately 5 seconds after power is turned ON.	Begin operation 5 seconds after turning power ON.
Start does not properly.		
mains ON, even witch is turned	Power was turned OFF while unit was in sampling standby state (lasts a maximum of 15 seconds after SAMPLING or SAMPLING LONG keys are pressed).	Power turns OFF as soon as sampling signal is received from built-in mic, external mic or external sound source. Power also turns OFF if no sampling signal is received within 15 seconds from when switch is turned OFF.
re sounds usly when programe pattern.	More than 2 keys were played simultaneously during programming.	If bass note sounds continuously, delete bass pattern and begin programming again. **NOTE:** Bass pattern must be input 1 note at a time.
r OFF function operate.	Auto Power OFF function does not operate in Chord Pattern programming mode (with rhythm stopped).	Press CHORD PATTERN KEY to exit from programming mode.

TROUBLESHOOTING

Trouble	Possible cause	Remedy
The Chord volume control does not function, and Tone may be altered via the UPPER TONE Keys.	Sample Channel not specified when performing Sampling input.	Turn off Key Split or Auto Accompanim functions before entering sampling mod this problem occurs. **NOTE:** Specify Sample Channel with SAMPLE CHANNEL KEY before sampling.
All functions return to initialized state (as immediately after powr ON).	4-note polyphonic chord played using sample sound.	Polyphonic chords played with sampling sounds may contain up to three notes. This includes notes played via the Sampling Pads.
Rhythm pattern stops suddenly during Rhythm Pattern programming, Tempo Indicator remains lit.	No. of notes input in Melody 2 memory have exceeded capacity (approximately 1000 notes).	Erase a section of some part in Multi-Channel memory or memorize entire section again. MEMORY OVER display disappear.
Data in memory may become altered or erased under the following conditions:	1. When batteries have become dead. 2. When operations are not performed correctly (as described in owner's manual).	1. Replace all batteries. 2. Refer to owner's manual for correct operating procedures.

Trouble	Possible cause	Remedy
Sample sound plays continuously when played on keyboard during Rhythm Pattern programming.	"SAMPLE" Percussion Key (SAMPLE) pressed while playing sample sound on keyboard during Rhythm Pattern programming.	Exit from the Pattern programming mode when this problem occurs. **NOTE:** Be sure to press the "SAMPLE" Percussion Key (SAMPLE) before inputting sample sounds in Rhythm Pattern.
Bass and chord sound continuously or do not sound at all after Pattern Program Key is pressed.	RHYTHM PATTERN, BASS PATTERN or CHORD PATTERN key pressed during Auto-Rhythm fill-in.	When the problem described at left occurs, stop the RHYTHM track and exit from the programming mode. **NOTE:** When programming patterns, press Pattern Keys only after stopping rhythm.

CARE OF YOUR KEYBOARD

Please observe the following precautions to assure safety and reliability.

LOCATION

To avoid malfunction, do not use this unit in the following locations for extended periods of time:

- In direct sunlight.
- Exposed to extremes of temperature or humidity.
- In sandy or dusty places.

POWER SUPPLY

Use only with rated voltage. Also, to help prevent noise and degraded sound quality, avoid using the same outlet as other equipment — particularly household appliances.

HANDLE GENTLY

Do not drop the unit, as strong shocks will definitely cause malfunctions. Also, sliders and keys are designed to operate with a light touch. Excessive force may cause damage.

KEEP IT CLEAN

Clean the keyboard with a soft cloth dampened with deter
Never use paint thinner, benzene or other solvents.

IN CASE OF MALFUNCTION...

In the event that your keyboard does not function properly, ch
whether connections are made correctly, and that the unit is
plied with power (are batteries dead?). If the unit still does
work, contact the original retailer or local Casio dealer. Never
tempt to repair the unit yourself.

KEEP THIS MANUAL

Store this manual in a safe place for future reference.

SPECIFICATIONS

Model:	SK-2100
Number of keys:	49 keys
Polyphonic:	8-note
Preset tones:	Upper tones: 16 Piano, Vibraphone, Celesta, Jazz organ, Pipe organ, Trumpet, Flute, Violin, Elec. guitar, Funky clavi., Synth. ens., Synth. sound, Conga (Sample 1 (PCM)), Piano (Sample 2 (PCM)), Vibraphone (Sample 3 (PCM)), Horn (Sample 4 (PCM)) Lower tones: 10 Piano, Vibraphone, Celesta, Jazz organ, Pipe organ, Trumpet, Elec. guitar, Funky clavi., Synth. ens., Synth. sound
Auto-rhythm:	20 Rock 1, 8 Beat 1, 16 Beat 1, Disco 1, Pops 1, Swing, Slow rock, Samba, Bossa nova, Waltz, Rock 2, 8 Beat 2, 16 Beat 2, Disco 2, Pops 2, Funk, Reggae, Salsa, Beguine, March
Auto-accompaniment function:	Casio chord ON/OFF, Fingered
Multi-channel memory function:	Chord memory: 159 chord MAX. Melody 1: 2024 notes MAX. Melody 2 (Sampling): 1024 notes MAX.
Pattern memory function:	2 Memory banks (2 bars + fill-in pattern (1 bar) each) •Rhythm pattern, Bass pattern, Chord pattren, Sampling rhythm
Sampling function:	Sampling rate: 10.113 KHz (Sampling), 10.113 KHz (Sampling long) Sampling time: 0.81 sec. (Sampling), 1.62 sec. (Sampling long) •Loop setting •Reverse setting •Key transpose •Envelope setting

SPECIFICATIONS

Terminals:	Line out: Output impedance 3 KΩ Output voltage 1.0 V (RMS) MAX Phones × 1 Foot volume × 1 Mic: Input impedance 10 kΩ Input sensitivity 4 mV Line in: Input impedance 100-KΩ Input sensitivity 100 mV
Tuning control:	±50 cents (±1/4 tone)
Built-in speakers:	12 cm dia. × 2 (output: 2W + 2W)
Auto power off function:	6 minutes after last operation
Power consumption:	9.0 W
Dimensions:	980(W) × 278(D) × 94(H)mm ($38^9/16$'' × $10^{15}/16$'' × $3^{11}/16$'')
Weight:	6.4 Kg (14.1 lbs) including batteries
Standard accessories:	6"D" size batteries, Dust cover, Music stand

**Design and specifications are subject to change without notice.*

WARNING:

CHANGING THE VOLTAGE SELECTOR MAY REQUIRE THE USE OF A DIFFERENT LINE CORD OR ATTACHMENT PLUG, OR BOTH. TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A. (not applicable to other areas).

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

..... reorient the receiving antenna
..... relocate the computer with respect to the receiver
..... move the computer away from the receiver
..... plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

CASIO®

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